

## REMARKS

Claims 1 and 7 have been amended, claim 20 has been cancelled, and claims 12-19 have been withdrawn. Thus claims 1-11 are pending in the application.

### Rejections under 35 U.S.C. § 102(b)

Claims 1-3 and 7-10 were rejected under 35 U.S.C. § 102(b) as being anticipated by Mizrah (US Patent No. 5,570,440). Applicants respectfully traverse this rejection in view of the amendments to independent claims 1 and 7.

Applicant has amended claims 1 and 7 to more particularly point out and distinctly claim that the inventions of claims 1 and 7 include at least one interval and optical length that is different from the other intervals between the recited grating sections, such that the plurality of grating sections couple light energy between the first guided mode and the second guided modes such that the first and second guided modes are co-propagated through the optical waveguide in a non-lossy manner. None of the prior art of record disclose or even suggest such a combination of features.

Mizrahi does not disclose or suggest the unique combination of elements recited in claims 1 and 7. Mizrahi only discloses the use of Bragg gratings, the Bragg gratings formed or tuned to provide a "leaky mode" which results in light exiting the medium. See Mizrahi, col. 5, ll. 5-45. In contrast, Applicants inventions claimed in claims 1 and 7 as amended result in light energy being co-propagated in the first and second modes in a non-lossy manner. For these reasons, Applicants believe that amended claims 1-7, and all of the claims dependent therefrom, are novel of the cited art of record, and respectfully request allowance of those claims.

Claim 6 was rejected under 35 U.S.C. § 102(b) as being anticipated by Canning et al. (US Patent No. 5,830,622). Applicants respectfully traverse this rejection.

Canning discloses forming an optical grating by exposing linearly spaced regions of an optical fiber to form a grating, and then modifying one or more spaces between the bands of a single grating, called concomitant regions by Canning, by exposing the one or more concomitant regions "within the uniform grating structure in order to produce a series of phase shifts in propagated light." Canning, Col. 4, ll. 65-67. See also, Canning, Col 3, ll. 55-67 and Col. 4, ll. 1-67. As set forth above, Canning neither teaches nor suggests a spectral shaping device having a plurality of grating sections separated by intervals and at least one interval and optical length that is different from the other intervals between the recited grating sections, such that the plurality of grating sections couple light energy between the first guided mode and the second guided modes such that the first and second guided modes are co-propagated through the optical waveguide in a non-lossy manner. For these reasons, Applicants respectfully submit that claim 6, which includes all of the limitations of claim 1, from which it depends, is novel over Canning, and all of the art of record, and request that claim 6 therefore be allowed.

#### Rejections under 35 U.S.C. § 103

Claims 4-5, 11 and 20 were rejected under 35 U.S.C. § 103 as being unpatentable over Mizrahi. Claims 4-5 depend from amended claim 1 and claim 11 depends from amended claim 7, and thus each of these claims includes all of the limitations of their independent claims. For all of the reasons set forth above, Mizrahi neither teaches or suggests a spectral shaping device (claim 1) or a coupler for coupling co-propagating guided modes of an optical waveguide (claim 7) having at least one interval and optical length that is different from the other intervals between the recited grating sections, such that the plurality of grating sections couple light energy between the first guided mode and the second guided modes such that the first and second guided modes are co-propagated through the optical waveguide in a non-lossy manner. Accordingly, Applicants respectfully request that claims 4-5 and 11 be allowed.

Claim 20 has been cancelled without prejudice, as it is dependent from claim 18, which was withdrawn in the election of claims contained within the paper filed 1/1/6/04, and should have been withdrawn at that time.

**CONCLUSION**

Applicants respectfully request entry of the amendment and favorable reconsideration of the pending claims. Should the Examiner have any questions concerning the foregoing, Applicant requests that the Examiner contact Applicants attorney, John Fitzgerald, at 310-242-2667.

Please charge any fees payable in connection with this response to our Deposit Account No. 06-2425.

Respectfully submitted,

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